What is claimed is:

1. In a communication network including a plurality of stations, a method of accessing said network for a first station, from said plurality of stations, comprising the steps of:

monitoring a load of traffic over said communication network;

measuring said load of traffic over said communication network;

dynamically setting a minimum contention window (CW) value of a contention window according to said load of traffic over said communication network.

2. The method as described in Claim 1, wherein said step of monitoring is implemented continually.

3. The method as described in Claim 1, wherein said step of monitoring is implemented periodically.

4. The method as described in Claim 1, wherein said step of monitoring is implemented asynchronously.

5. The method as described in Claim 1, wherein said plurality of stations are substantially compliant with a version of the IEEE 802.11 protocol.

6. The method as described in Claim 1, wherein said step of measuring said load of traffic includes calculating a collision rate.

7. The method as described in Claim 6, wherein said step of calculating said collision rate over a specific period of time includes the steps of:

determining a number of transmissions over said network;

determining a number of virtual carrier sense collisions over said network;

determining a number of physical carrier sense collisions over said communication network;

determining a total number of collisions by adding said number of virtual carrier sense collisions to said number of physical carrier sense collisions together;

calculating said collision rate by dividing said total number of collisions by the sum of said number of transmissions and said total number of collisions.

8. The method as described in Claim 7, wherein said minimum CW value is selected from a range of values according to said collision rate.

9. The method as described in Claim 8, wherein said minimum CW value is selected from said range of values as follows:

for said collision rate between zero up to and including 25 percent, said minimum CW value is three slots;

for said collision rate between greater than 25 percent up to and including 50 percent, said minimum CW value is seven slots;

for said collision rate between greater than 50 percent up to and including 75 percent, said minimum CW value is fifteen slots; and

for said collision rate greater than 75 percent, said minimum CW value is 31 slots.

10. The method as described in Claim 9, wherein each slot is equal to 20 microseconds.

11. The method as described in Claim 1, wherein said contention window includes a CW value, wherein said minimum CW value of said contention window is used to calculate subsequent CW values of said contention window, whereby said subsequent CW values include a first, second, and on up to $n^{th}$ CW values, whereby said first CW value is calculated as two times said minimum CW value plus one, and subsequent CW values for said contention window are calculated such that $CW_n = 2(CW_{n-1}) + 1$.

12. The method as described in Claim 11, comprising the further step of setting a backoff period from said contention window by randomly selecting a value between zero and said CW value of said contention window.

13. In a communication network including a plurality of stations, a method of accessing said communication network for a first station, from said plurality of stations, comprising the steps of:

monitoring a load of traffic over said communication network;

calculating a number of transmissions over said communication network over a specific period of time as a measure of said load of traffic;

calculating a total number of collisions over said communication network over said specific period of time as a measure of said load of traffic; and

dynamically setting a minimum contention window (CW) value of a contention window as a function of said number of transmissions and said total number of collisions.

14. The method as described in Claim 13, wherein said plurality of stations are substantially compliant with a version of the IEEE 802.11 protocol.

15. The method as described in Claim 13, wherein said total number of collisions includes over said communication network a number of virtual carrier sense collisions and a number of physical carrier sense collisions.

16. The method as described in Claim 15, comprising the further step of calculating a collision rate by dividing said total number of collisions by the sum of said number of transmissions and said total number of collisions.

17. The method as described in Claim 16, wherein said minimum CW value of said contention window is dynamically selected from a range of values according to said collision rate as follows:

for said collision rate between zero up to and including 25 percent, said minimum CW value is three slots;

for said collision rate between greater than 25 percent up to and including 50 percent, said minimum CW value is seven slots;

for said collision rate between greater than 50 percent up to and including 75 percent, said minimum CW value is fifteen slots; and

for said collision rate greater than 75 percent, said minimum CW value is thirty-one slots.

18. The method as described in Claim 17, wherein each slot is equal to 20 microseconds.

19. The method as described in Claim 13, wherein said contention window includes a CW value, wherein said minimum CW value of said contention window is used to calculate subsequent CW values of said contention window, whereby said subsequent CW

values include a first, second, and on up to $n^{th}$ CW values, whereby said first CW value is calculated as two times said minimum CW value plus one, and subsequent CW values for said contention window are calculated such that $CW_n = 2(CW_{n-1}) + 1$.

20. The method as described in Claim 19, comprising the further step of setting a backoff period from said contention window by randomly selecting a value between zero and said CW value of said contention window.

21. A computer system comprising a processor, a memory unit, and a display screen, wherein said memory contains instructions that when executed implement a method of accessing said network for a first station, from said plurality of stations, comprising the steps of:

monitoring a load of traffic over said communication network;

measuring said load of traffic over said communication network;

dynamically setting a minimum contention window (CW) value of a contention window according to said load of traffic over said communication network.

22. A computer system as described in Claim 21, wherein said step of monitoring is implemented continually.

23. A computer system as described in Claim 21, wherein said step of monitoring is implemented periodically.

24. A computer system as described in Claim 21, wherein said step of monitoring is implemented asynchronously.

25. A computer system as described in Claim 21, wherein said plurality of stations are substantially compliant with a version of the IEEE 802.11 protocol.

26. A computer system as described in Claim 21, wherein said step of measuring said load of traffic includes calculating a collision rate.

27. A computer system as described in Claim 26, wherein said step of calculating said collision rate over a specific period of time includes the steps of:

determining a number of transmissions over said network;

determining a number of virtual carrier sense collisions over said network;

determining a number of physical carrier sense collisions over said communication network;

determining a total number of collisions by adding said number of virtual carrier sense collisions to said number of physical carrier sense collisions together;

calculating said collision rate by dividing said total number of collisions by the sum of said number of transmissions and said total number of collisions.

28. A computer system as described in Claim 27, wherein said minimum CW value is selected from a range of values according to said collision rate.

29. A computer system as described in Claim 28, wherein said minimum CW value is selected from said range of values as follows:

for said collision rate between zero up to and including 25 percent, said minimum CW value is three slots;

for said collision rate between greater than 25 percent up to and including 50 percent, said minimum CW value is seven slots;

for said collision rate between greater than 50 percent up to and including 75 percent, said minimum CW value is fifteen slots; and

for said collision rate greater than 75 percent, said minimum CW value is 31 slots.

30. A computer system as described in Claim 29, wherein each slot is equal to 20 microseconds.

31. A computer system as described in Claim 21, wherein said contention window includes a CW value, wherein said

minimum CW value of said contention window is used to calculate subsequent CW values of said contention window, whereby said subsequent CW values include a first, second, and on up to $n^{th}$ CW values, whereby said first CW value is calculated as two times said minimum CW value plus one, and subsequent CW values for said contention window are calculated such that $CW_n = 2(CW_{n-1}) + 1$.

32. A computer system as described in Claim 31, comprising the further step of setting a backoff period from said contention window by randomly selecting a value between zero and said CW value of said contention window.